

Claims

1. A surgical tool set used to prepare said first bone for accepting a first portion of a medical device and a second bone for accepting a second portion of a medical device, and for inserting said first portion of a medical device into a first bone and a second portion of a medical device into said second bone, said surgical tool set comprising:

a centering jig having an elongate shaft, a neck and a hollow head;

a first magnet insertion tool having a collet, a center shaft, an outer shaft, a locking shaft, and a rotating handle;

a second insertion tool having a shaft with a first end, a second end, a trough section, and a keyed section; and

a fork jig having a base portion and first and second prongs extending therefrom.

2. The tool set of claim 1 wherein said centering jig further provides a handle mounted on said elongated shaft;

said centering jig neck having a first and second end, said first end for engagement with said elongate shaft and said second end for engagement with said hollow head,

said hollow head having a first end and a second end, said hollow head for engagement with said neck, and said hollow head first end having a plurality of teeth for securing engagement with said first bone.

3. The tool set of claim 1 wherein said first insertion tool further provides a circular cross section on said collet having first and second ends, said first end of said collet being flared and consisting of a plurality of tines, one of said tines having a hole for receiving an alignment pin and said second end of said collet for engagement with said center shaft, said center shaft of said first insertion tool having a first end and a second end, said first end of said center shaft for

engagement with said collet and said second end of said center shaft for engagement with said locking shaft;

said outer shaft of said first insertion tool being hollow and having a first end and a second end, said second end of said outer shaft abutting said rotating handle, said first end of said outer shaft being chamfered and said second end of said outer shaft being flared outwardly,

said locking shaft of said first insertion tool having a first end and a second end, said first end of said locking shaft being threaded for engagement with said rotating handle and said second end of said locking shaft for engagement with a handle, said locking shaft being hollow through said first end of said locking shaft to receive said center shaft, and said rotating handle having a first end and a second end where said first end of said rotating handle abuts said outer shaft and said second end of said rotating handle includes a threaded portion for threaded engagement with said locking shaft.

4. The tools set of claim 1 further including a cannulated tap tool having a first end and a second end, said first end having four flutes and a threaded portion and said second end adapted for engagement with a handle;

5 The tool set of claim 1 wherein said centering jig further provides said hollow head with an outer diameter and a first portion of a medical device having an outer diameter equal to said outer diameter of said hollow head.

6. The tool set of claim 1 wherein said trough section of said second insertion tool is C-shaped and includes two arch side portions, and said keyed section comprises two T-shaped extensions extending longitudinally from said arch side portions of said trough section, and said second end of said second insertion tool is adapted for engagement with a handle.

7. The tool set of claim 1 wherein said fork jig base includes a front surface, a back surface, having a front surface and a back surface; multiple apertures through said front surface to said back surface, and a slot intermediate said first and second prongs.

8. The tool set of claim 7 further including a drill guide tool which includes a tube having an outside diameter, and said outside diameter is less than or equal to the width of said slot between said first and second prongs.

9 A method for inserting a magnet system into a first living bone and a sensor system into a second living bone comprising:

- a) making an incision into tissue in an area covering said first and second living bones;
- b) exposing said first and second living bones;
- c) placing a centering jig tool over a surface of said first living bone;
- d) inserting a first guide wire into said centering jig and extending said first guide wire into engagement with said first living bone;
- e) removing said centering jig and leaving said first guide wire engaged with said first living bone;
- f) placing a fork jig having multiple apertures and a slot adjacent to said second living bone such that said first guide wire passes through one of said multiple apertures;
- g) placing a drill guide within said slot of said fork jig;
- h) placing a second guide wire within said drill guide and extending said second guide wire into engagement with said second living bone;
- i) guiding a first cannulated drill, circumscribing said first guide wire, into engagement with said first living bone and drilling a hole into said first living bone;

j) removing said first cannulated drill and guiding a first cannulated tap, into engagement with said first living bone and tapping said first living bone;

k) removing said first guide wire;

l) guiding a second cannulated drill, circumventing said second guide wire, into contact with said second living bone and drilling a hole into said second living bone;

m) removing said second cannulated drill and guiding a second cannulated tap, circumventing said second guide wire, into engagement with said second living bone and tapping said second living bone;

n) removing said second cannulated tap from said second living bone;

o) inserting said sensor system into said first living bone using a sensor insertion tool;

p) connecting electrically said sensor system to an implantable stimulation device;

q) removing said first cannulated tap from said first living bone and inserting said magnet system, using a magnet insertion tool, into a desired position as determined by feedback from said sensor system.

10. The method of claim 9 further comprising the step of utilizing visualizing tools.

11. The method of claim 9 wherein said first living bone is the lunate bone of the human wrist and said second living bone is the radius bone of the human wrist.

12. A centering jig used to prepare a first bone for accepting a magnet system comprising:
an elongate shaft being mountable to a handle,
a hollow head having a first end and a second end, said first end having a plurality of teeth for contacting said first bone, and
a neck having a first end and a second end, said first end being attachable to said elongate shaft and said second end being oppositely attachable to said hollow head.

13. A magnet insertion tool used to insert a magnet system into a first bone comprising:

a collet having a circular cross section and a first end and a second end, said first end of said collet being flared and consisting of a plurality of tines, one of said tines having a hole for receiving an alignment pin and said second end of said collet being attachable to a center shaft;

said center shaft having a first end and a second end, said first end of said center shaft attachable to said collet and said second end of said center shaft attachable to a locking shaft;

an hollow outer shaft having a first end and a second end, said second end of said outer shaft abutting a rotating handle, said first end of said outer shaft being chamfered and said second end of said outer shaft being flared outwardly;

said locking shaft having a first end and a second end, said first end of said locking shaft being threaded for attachment to said rotating handle; and

said rotating handle having a first end and a second end, said first end of said rotating handle abutting said outer shaft and said second end of said rotating handle threaded and attachable to said locking shaft.

14. A sensor insertion tool for inserting a sensor system into a second bone, said sensor insertion tool comprising:

a shaft having a first end, a second end, a troughed section, and a keyed section;

said troughed section is C-shaped and has two arched sides;

said keyed section comprises two T-shaped extensions extending longitudinally from said arched sides of said troughed section; and

said second end is attachable to a handle.